SECTION II—REMARKS

Applicants respectfully request reconsideration of the above referenced patent application for the following reasons:

Reply to Applicants' prior remarks

Responsive to Applicants' prior remarks filed May 13, 2011, the Examiner enters Applicants' amendments to the claims; the Examiner acknowledges receipt of the terminal disclaimer; and the Examiner withdraws the rejections to Applicants' claims under 35 U.S.C. § 103 citing Boariu and Giannakis.

However, the Office Action now states at page 2, Item 3 in the "Response to Arguments" section that: "Applicant's arguments … have been considered **but are moot in view of the new ground(s)** of rejection." The present Office Action now re-rejects Applicants' claims under 35 U.S.C. § 103 citing various combinations of Boariu, Wallace, Giannakis and Csapo.

Applicants traverse the new rejections in the remarks that follow.

Invitation for Examiner's Interview:

If an interview with Applicants' undersigned legal representatives would be helpful to the Examiner in expediting examination of the claims and issuing a subsequent allowance of the pending claims, including for example, a technical discussion about Applicants' specification, or the presently cited references as they relate to Applicants' claimed embodiments, then Applicants invite the Examiner to contact the undersigned for such a discussion.

Moreover, in the interests of advancing the present case toward as expeditious of an allowance as feasible, Applicants are open to clarifying amendments proposed by the Examiner, if such amendments serve to place the present case into immediate condition for allowance. While applicants believe the presently recited claims are in condition for allowance, if examination of the claims could be expedited or made more efficient for the Examiner through clarification, then Applicants are amenable to discussing such clarifications with the Examiner in an effort to bring prosecution on the merits to a close.

Rejections under 35 U.S.C. § 103

The Office Action rejects claims 30-39 under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 6,865,237 to Boariu et al. ("Boariu") in view of U.S. Patent No. 6,473,467 to Wallace et al. ("Wallace") and U.S. Patent No. 7,224,744 to Giannakis et al. ("Giannakis").

Applicants respectfully disagree. For instance, independent claim 30 recites (with emphasis added):

> … receiving content, at a diversity agent, the content for transmission from a wireless communication system **having *M* transmit antennae and *N* receive antennae and *Nc* subcarriers, where *Nc*>>*M*,*N*, the received content for transmission from *more than two* of the *M* transmit antennae**, wherein the received content is a vector of input symbols (**s**) of size *Nc* x 1, and wherein the *Nc* subcarriers is the number of subcarriers of a multicarrier wireless communication channel of the wireless communication system; and … .

The present Office Action states at page 4:

> Boariu fails to explicitly disclose where Nc>>M,N.
>
> However, Wallace teaches the number of subcarriers being greater than the number of antennas (*col. 11, lines 63-64*).
>
> In view of this, it would have been obvious to one skilled in the art at the time the invention was made, to modify Boariu's system by incorporating the teachings of Wallace, for the purpose of obtaining a desired antenna and frequency diversity (*col. 12, lines 2-4*).

We agree that Boariu fails to disclose the recited limitation. However, we respectfully disagree that newly cited Wallace cures the defect of Boariu. The Office Action specifically refers to column 11, lines 63-64 of Wallace. The relevant passage of Wallace is set forth by the paragraph beginning at column 11, line 58 through column 12, line 4, which discloses in its entirety:

> The same or different data may be transmitted from multiple antennas and/or on multiple sub-bands to obtain the desired diversity. For example, the data may be transmitted on: (1) one sub-channel from one antenna, (2) one sub-channel (e.g., sub-channel 1) from multiple antennas, (3) one sub-channel from all NT antennas, (4) **a set of sub-channels (e.g., sub-channels 1 and 2) *from one antenna*,** (5), a set of sub-channels from multiple antennas, (6) a set of sub-channels from all NT antennas, or (7) a set of sub-channels from a set of antennas (e.g., sub-channel 1 from antennas 1 and 2 at one time slot, sub-channels 1 and 2 from antenna 2 at another time slot, and so on). Thus, any combination of sub-channels and antennas may be used to provide antenna and frequency diversity.

Example number four disclosing transmission from "**a set of sub-channels (e.g., sub-channels 1 and 2) from one antenna**" appears to represent the example highlighted by the Office Action as Wallace's example #4 is specifically at column 11, lines 63-64 as noted by Examiner's pin-point reference to Wallace.

Moreover, it is true that "**a set of sub-channels (e.g., sub-channels 1 and 2)**" as disclosed by Wallace, when transmitted "**from *one* antenna**" must, by definition, represent *sub-channels > one transmit antenna*. Because there are more than one sub-channels "**(e.g., sub-channels 1 and 2),**" as set forth by Wallace, and expressly one antenna from which to transmit, no other result may stand other than *sub-channels > one transmit antenna* or in the words of the Office Action: "Wallace teaches the **number of subcarriers being greater than the number of antennas**."

Applicants do not dispute this logic.

Notwithstanding the above, Wallace is insufficient to cure the deficiencies of Boariu because independent claim 30 expressly sets forth "**having *M* transmit antennae and *N* receive antennae and *Nc* subcarriers, where *Nc>>M,N***, the received content for **transmission from *more than two* of the *M* transmit antennae** … ."

Thus, while Wallace plainly supports the proposition that "the **number of subcarriers** [can be] **greater than the number of antennas**" as set forth by the Office Action, the relied upon configuration of Wallace is incompatible with Boariu which requires multiple antennae and further in direct contradiction to Applicants' expressly recited limitation which requires the ***M* transmit antennae** be "more than two" as transmission of content must be "… **from *more than two* of the *M* transmit antennae**," as established by the express language of the claim.

Further still, it would be required to "change the **principle of operation**" of the modified reference **and additionally** "render the prior art reference **unsatisfactory for its intended purpose**," if the proposed combination of Wallace and Boariu were to stand. The proposed combination therefore represents an impermissible combination which cannot be relied upon to sustain a rejection of the claims. For instance, Applicants respectfully make reference to

M.P.E.P. § 2143.01 § (V) and (VI) which sets forth the following considerations with respect to suggestions to combine or "modify the references:"

> V. THE PROPOSED MODIFICATION CANNOT **RENDER THE PRIOR ART UNSATISFACTORY** FOR ITS INTENDED PURPOSE
>
> If [the] proposed modification would render the prior art invention being modified **unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification**. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) … .
>
> * * *
>
> VI. THE PROPOSED MODIFICATION CANNOT **CHANGE THE PRINCIPLE OF OPERATION** OF A REFERENCE
>
> If the proposed modification or combination of the prior art would **change the principle of operation of the prior art invention being modified**, then the teachings of the references are not sufficient to render the claims prima facie obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) … .

Here, the proposal to modify Boariu with Wallace as applied by the present Office Action (e.g., more than one sub-carrier "**from *one* antenna**") by extension requires Boariu to operate in such a manner, that is, with transmission from one antenna. Thus, it would be necessary to "change the **principle of operation**" of Boariu which is in of itself not permissible, and further to further "render the prior art reference **unsatisfactory for its intended purpose**," as Boariu could no longer operate by "transmitting [] channel symbols via several different channels and ***two or more* antennas** … ." [Refer to the abstract, *et seq*., of Boariu.]

Stated differently, Boariu cannot be made compatible with a single transmit antenna configuration without violating M.P.E.P. § 2143.01 § (V) and (VI).

Because the combination of Boariu as modified by Wallace fails to support the rejection of claim 30 in view of the preceding discussion, Applicants respectfully submit that claim 30 is patentable over the references.

At page 4, second to last paragraph, the Office Action correctly concedes that Boariu fails to disclose additional limitations which Applicants recite in independent claim 1, but asserts that Giannakis cures the admitted deficiencies.

Giannakis, however, whether considered individually or in combination with Boariu and Wallace, does not cure the deficiencies of Boariu and Wallace as discussed above with respect to independent claim 30 because Giannakis similarly is silent with respect to:

> … receiving content, at a diversity agent, the content for transmission from a wireless communication system **having *M* transmit antennae and *N* receive antennae and *Nc* subcarriers, where *Nc*>>*M*,*N*, the received content for transmission from *more than two* of the *M* transmit antennae**, wherein the received content is a vector of input symbols (**s**) of size *Nc* x 1, and wherein the *Nc* subcarriers is the number of subcarriers of a multicarrier wireless communication channel of the wireless communication system; and … .

such as that which Applicants expressly recite in independent claim 30 as amended herein.

Because the combination of Boariu, Wallace and Giannakis fails to support the rejection of claim 30 in view of the preceding discussion, Applicants respectfully submit that independent claim 30 is patentable over the references and in condition for allowance. Applicants further submit that independent claims 35 and 40, which recite similar limitations, as well as those claims which depend directly or indirectly upon independent claims 30, 35, and 40, and thus incorporate the limitations of their respective parent claims, are also patentable over the references and in condition for allowance for at least the same reasons as stated above with respect to independent claim 30 rejected under 35 U.S.C. § 103.

Accordingly, Applicants respectfully request the Examiner to withdraw the rejection to the claims under 35 U.S.C. §103.

Rejections under 35 U.S.C. § 103

The Office Action rejects claims 40-44 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Boariu, Wallace, Giannakis, and U.S. Patent No. 6,801,788 to Csapo et al. ("Csapo").

Csapo, whether considered individually or in any combination with Boariu, Wallace and/or Giannakis, fails to cure the deficiencies of Boariu, Wallace and Giannakis as noted above with respect to the rejection of independent claim 30 under 35 U.S.C. § 103, given that Csapo similarly fails to disclose:

> … receiving content, at a diversity agent, the content for transmission from a wireless communication system **having *M* transmit antennae and *N* receive antennae and *Nc* subcarriers, where *Nc*>>*M*,*N*, the received content for transmission from *more than two* of the *M* transmit antennae**, wherein the received content is a vector of input symbols (**s**) of size *Nc* x 1, and wherein the *Nc* subcarriers is the number of subcarriers of a multicarrier wireless communication channel of the wireless communication system; and … .

such as that which Applicants expressly recite in independent claim 30 as amended herein. Csapo does not disclose such a limitation and does not cure the deficiencies of the proposed modification to Boariu by the teachings of Wallace.

By extension, claims 40-44 either directly recite limitations similar to those of independent claim 30 discussed in detail above, or incorporate such limitations, and thus, Applicants respectfully submit that claims 40-44 are patentable over the combination of references and in condition for allowance for at least the same reasons as stated above with respect to the rejection of independent claims 30 under 35 U.S.C. § 103.

Accordingly, Applicants respectfully request the Examiner to withdraw the rejection to the claims under 35 U.S.C. §103.

New claims 45-49 presented herein:

Applicants respectfully submit that new claims 45-49 presented herein do not add new subject matter as the claims find support in the specification as originally filed with the patent application, in the figures accompanying the patent application, and/or in the original claims presented with the patent application. Applicants further submit that new claims 45-49 are patentable over the combination of references cited by the present Office Action for at least the same reasons as set forth above with respect to the rejection of independent claim 30 rejected under 35 U.S.C. § 103 as the claims depend directly or indirectly from independent claim 30 and thus, incorporate the limitations of the independent base claim upon which they depend.

Applicants therefore respectfully request the Examiner to allow new claims 45-49 as presented herein.

CONCLUSION

Given the above remarks, all claims pending in the application are in condition for allowance. If the undersigned attorney has overlooked subject matter in any of the cited references that is relevant to allowance of the claims, the Examiner is requested to specifically point out where such subject matter may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (503) 439-8778.

Charge Deposit Account

Please charge our Deposit Account No. 02-2666 for any additional fee(s) that may be due in this matter, and please credit the same deposit account for any overpayment.

Respectfully Submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

/**Spencer K. Hunter**/	January 06, 2012
Spencer K. Hunter	Date
Registration No. 67,337	
Attorney for Applicants	

Blakely, Sokoloff, Taylor & Zafman LLP
1279 Oakmead Parkway
Sunnyvale, CA 94085-4040
Telephone: (503) 439-8778
Facsimile: (503) 439-6073